

MAY 03 2007

Appl. No.: 10/620,249

REMARKS

Claims 1-65 are pending in the instant application. Claims 1, 11, 17, 33, 43, 48, and 58 are amended by this amendment. No new matter is added by the amendments, which find support throughout the specification and figures. In view of the amendments and the following remarks, reconsideration and allowance of the instant application are respectfully requested.

Applicants gratefully acknowledge the Examiner's assistance in discussing the claims in the Examiner Interview occurring on or about April 17, 2007. Applicants have amended the claims consistent with the suggestion of the Examiner made in the interview, but for one exception. In claim 1, the Examiner had suggested that the references to a respective second range should be plural. However, the claim as presented recites "a *plurality of* interim-fast-access-time *nodes*, configured to operate independently of one another, *each* interim-fast-access-time *node* being assigned a *respective second range* of the LBAs and coupled to receive data from and provide data to the one or more slow-access-time-mass-storage nodes having LBAs within the respective second range, all of the second ranges of LBAs comprising a total LBA range". Therefore, since a plurality of interim-fast-access-time nodes are recited, and each has a respective second range, a plurality of second ranges is claimed, even though the particular reference in the claim is to a single second range. Applicants respectfully submit that the amended claim is clear and definite, and respectfully request that the Examiner telephone Applicant's representative at the number below if any problem is apparent.

Applicants amend claims 11, 43, and 58 into their form prior to the amendment filed November 20, 2006. Since these claims were previously deemed allowable, it is respectfully submitted that the amended claims are also allowable.

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Claims 1-65 stand rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Applicants respectfully traverse.

Applicants previously amended independent claims 1, 17, 33, and 48 to indicate that all of the second ranges of LBAs comprise *a total LBA range*, and all of the further second ranges of LBAs comprise *the same total LBA range*. The following excerpts from the published application support the amendments made to the claims in the previous amendment:

[0011] Each cache node communicates with the one or more mass storage nodes and is assigned a range of LBAs, so that *together the cache nodes cover the complete LBA range of the mass storage nodes....*

[0022] The data is preferably allocated into groups of data within the one or more slow-access-time-mass-storage nodes according to a pre-defined unit of the storage system consisting of an integral number of bytes of the data, and the *mapping includes a correspondence between the interim-fast-access-time nodes and the groups of data.*

[0053] ... The data stored within system 10 is stored at logical block addresses (LBAs) in one or more slow access time mass storage nodes, hereinbelow assumed to be one or more disks 12, by way of example. *LBAs for system 10 are preferably grouped into logical units (LUNs) and both LBAs and LUNs are allocated by a system manager 54*, which also acts as central control unit for the system.

[0056] At setup of system 10 system manager 54 assigns a range of LBAs to each cache node 20. *Manager 54 may subsequently reassign the ranges during operation of system*, and an example of steps to be taken in the event of a node change is described below with reference to FIG. 5. *The ranges are chosen so that the complete memory address space of disks 12 is covered, and so that each LBA is mapped to at least one cache node*; typically more than one is used for redundancy purposes....

[0068] Mapping (4) and Table I are *examples of correspondences that assign each track comprised in disks 12 to a specific cache node ....*

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(emphasis added). It is therefore respectfully submitted that the amendments to the claims are supported by the specification as filed.

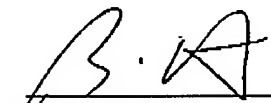
Applicants have also amended independent claims 1, 17, 33, and 48 to indicate that all of the second ranges of LBAs comprise a total LBA range, and all of the *new respective* second ranges of LBAs comprise the same total LBA range. It is respectfully submitted that the amendment to these claims clarifies that the reassignment of the interim-fast-access-time nodes to a *new respective* second range of LBAs from a second range of LBAs indicates a change in the ranges, and not a change in the total set of LBAs. In this manner, the rebalancing of the present invention is achieved. It is apparent that the specification as originally filed discloses the features of "wherein the interim-fast-access-time nodes are configured to be reassignable to a new respective second range of the LBAs." The present amendments clarify that the new respective second range to which the interim-fast-access-time nodes are reassigned are ranges within the same total set of LBAs to which the interim-fast-access-time nodes were previously assigned via the second ranges. Therefore, it is respectfully requested that the rejections be withdrawn.

In view of the remarks set forth above, this application is in condition for allowance which action is respectfully requested. However, if for any reason the Examiner should consider this application not to be in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

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Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Respectfully submitted,

  
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